

**WHAT'S IN THE ANNUAL DATABASE OF
GLOBAL WINE MARKETS, 1835 TO 2016?**



Kym Anderson* and Vicente Pinilla**

* University of Adelaide
kym.anderson@adelaide.edu.au
ORCID Code: 0000-0002-1472-3352

** Universidad de Zaragoza and Instituto Agroalimentario de Aragón (IA2)
vpinilla@unizar.es
ORCID Code: 0000-0003-2256-8898

Abstract

This paper documents a new, unique annual database of global wine markets covering 1835 to 2016. The database expands enormously the opportunities for conducting studies on wine production, consumption and trade from an historical perspective for the world as a whole and for most relevant countries. The combination of this basic information with other economic variables such as real GDP, population, total merchandise trade, total crop area and the consumption of other alcoholic drinks has enabled us to generate myriad derived variables that are helpful for comparative analyses as well as for studying the two waves of globalization.

Keywords: Wine History, Historical Databases, Economic History, Wine Economics

Resumen

Este trabajo documenta una nueva y única base de datos anual de los mercados globales del vino entre 1835 y 2016. La base de datos incrementa enormemente las oportunidades para desarrollar investigaciones sobre la producción de vino, su consumo y comercio, desde una perspectiva histórica, para el mundo y para los países más relevantes. La combinación de esta información básica con otras variables económicas como el PIB en términos reales, la población, el comercio total de bienes, el área total cultivada y el consumo de otras bebidas alcohólicas nos ha permitido generar una gran cantidad de variables derivadas que son muy útiles para el análisis comparativo, así como para el estudio de las dos oleadas globalizadoras.

Palabras claves: Historia del vino, bases de datos históricas, historia económica, economía del vino

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What's in the annual database of Global Wine Markets, 1835 to 2016?

The study of the two waves of globalization has been one of the most popular topics in historical research over the past two decades. Economic historians and world historians in particular have made it a priority among their research topics.¹ The study of the second wave of globalization has also become highly relevant in other scientific fields, such as economics, geography, politics and sociology.

From an economic perspective, the central aspects in the study of the globalization phenomenon have been its causes and consequences, and its temporal dynamics through the study of the market integration processes and its principal pillars: international trade, migration of workers and capital flows.

The majority of the historical research in international trade has tended to focus on the analysis of trade flows between large regions of the world, or between countries, and the study of its determinants, following the pioneering contributions of Lewis (1952, 1981), Jacks (2005, 2006), Meissner et al. (2011), Estevadeordal et al. (2003), Findlay and O'Rourke (2007) and Federico and Tena-Junguito (2016). Studies that focus on just agricultural product trade in both waves of globalization and its causes include Aparicio et al. (2009) and Serrano and Pinilla (2010, 2011, 2012 and 2014). These general studies have been extended in recent years with analyses of a series of food or agricultural products that experienced significant globalization over the past few centuries in terms of their consumption, production or trade. There are extensive monographs for products such as silk (Federico 1997), coffee (Clarence-Smith and Topik 2003), beer (Swinnen 2011) and chocolate (Squicciarini and Swinnen 2016), as well as many articles that study other products. These studies enable us to understand the development of the two waves of globalization in a much more precise way than more-general analyses, as they analyse and interpret, with greater precision, the driving

¹ What might be the pioneering studies in both fields were published at the same time: O'Rourke and Williamson (1999) for economic history and Pomeranz (2000) for world history. The founding of the *Journal of Global History* also was in 2000, when the California School began intense publishing activity (Vries 2010). Subsequent noteworthy books with the economic history perspective are Bordo et al. (2003) and Findlay and O'Rourke (2007) and there has been an enormous flow of articles in academic journals.

mechanisms of goods market integration as globalization proceeds. One of the obstacles faced is the difficulty in obtaining good data for the whole world and for the different countries over long periods of time, even for a single product.

The *Global Wine Markets Annual Database, 1835 to 2016* (<https://www.adelaide.edu.au/wine-econ/databases/global-wine-history/>) was developed to respond to this need. The database provides researchers with wine production, trade and consumption data that cover the whole world over two globalization waves. This database built on one created by Anderson and Nelgen (2011) which included data for the period 1961-2009². Apart from adding many more years, more variables have been added, especially on consumption of wine and other alcoholic beverages.

Wine has been chosen as a case study due to its importance from economic, social and cultural points of view. For several millennia wine has been a key drink in the diet and culture of civilisations that developed in Eurasia and around the Mediterranean Sea. Further diffusion of vine growing and wine production was limited until the Age of Discovery. From the Mediterranean regions it slowly advanced towards Europe's Atlantic coast, where the climatic conditions were ideal for growing vines, but then receded in Anatolia, the Middle East and North of Africa as these lands became dominated by the Islamic Empires, due to the prohibition of alcohol consumption according to the Quran. From the sixteenth century, wine production extended, albeit modestly, to the Americas and then South Africa. It was not until the mid-nineteenth century that wine production increased significantly in California and the rest of the New World. However, it took until the second half of the twentieth century before wine globalization really took off.

The key role played by wine in firstly Western European civilisation and subsequently in others, together with its importance in the economy of the old and new producing countries, has generated increasing interest in its study by different social science fields, such as economics, history or geography. There is a growing number of academic social science journals specialised in wine, such the *Journal of Wine Economics*, *Wine Economics and Policy* and the *Journal of Wine Research*. Similarly,

² This work has been updated: Anderson, Nelgen and Pinilla (2017).

specialised academic associations organise annual conferences in which the latest advances in this field are presented.³

The intensifying globalization of the consumption and production of wine, and especially the expansion of its trade, since 1990, has given rise to the study of the economy and history of wine also from a global perspective, going beyond earlier national case studies and limited comparative studies.⁴

A brief history of the database

The creation of the database was undertaken simultaneously with the development of an international project involving a considerable number of researchers with the objective of compiling a world economic history of wine over the past two centuries (Anderson and Pinilla 2018a). The aim of that research project was to analyse the different national cases from a comparative history perspective (following Hatton et al. 2007), and to draw lessons from the historical analysis for the future of this industry. To do so required collaboration between applied agricultural economists and (mainly economic) historians.

The database constituted the primary source of quantitative information used for this project, but some authors were able to supplement that with more-detailed national data such as on wine regions and winegrape varieties. Initial versions were completed early in the project, with new data being added or corrections being made by participants in the project as new or better sources were found. These additions and corrections continued to be made until the database was publicly launched and made freely available from late 2017. Users are encouraged to contribute to its expansion and improvement.

Overview and structure of the database

³ Such as the American Association of Wine Economists, Europe's Vineyard Data Quantification Society and the Academy of Wine Business Research.

⁴ A pioneering study was Unwin (1991). Others include Anderson (2004), Campbell and Guibert (2007) and Simpson (2011).

The database provides historical quantitative information for all key countries involved in wine production, consumption and trade. It also has auxiliary data on such macro variables as total agricultural crop area, total and adult population, real GDP at 1990 prices, local currency to US dollar current exchange rates, total merchandise exports and imports, volumes of production, consumption and trade in beer, and consumption of other alcoholic drinks and hence of all alcohol (expressed as litres of alcohol). These are valuable for calculating intensive indicators such as per capita and per \$ of real GDP, to compensate for differences in country size.

The years covered differ across variables depending on the availability of data. Although some tables begin before the nineteenth century, the main database starts in 1835 but is not complete for all countries from this year. There are comprehensive data for the whole world in terms of the area under vine from 1900; volumes of wine production and exports from 1860; wine import volume from 1925; current value of wine exports from 1900 and wine imports from 1961; and volume of wine consumption from 1961 (Table 1).

We aimed to go back to 1835 because that is when the first wave of globalization began, according to O'Rourke and Williamson (2002, 2004). That is also just before California, South Australia, Victoria and New Zealand began commercial winegrape production. A few countries go back further (Portugal to 1750, South Africa to the 1660s, and Britain to the 1320s), but for many other countries the data are only sporadic until the mid-19th century or later. We therefore interpolated to fill data gaps in the most important series (volumes of wine production, exports and imports) so as to be able to estimate global totals for those key variables back to 1860 when globalization accelerated (thanks to Gladstone's tariff cuts, the treaty between Britain and France, and the subsequent freeing of trade in other parts of Europe). That allowed shares of world totals to be estimated for each variable. The interpolated data represent a small part of the world total of such variables, not exceeding 10% before 1900 and 5% thereafter. They are coloured in the spreadsheet, to warn users against relying on them in any study of countries with incomplete data.

The data are grouped in the tables into eight geographic regions. Three of them show all countries (Australasia, North America, and West European major exporters), and the other five show major countries separately plus a residual grouping for each of those regions. A total of 47 individual countries are reported, plus the five residual

regions. Those 47 countries have accounted for 96% of global wine production and exports and over 90% of global consumption and imports since 1860.

Of course national borders did not remain fixed over such a long timeframe. We follow the convention of other comparative historians in using current national boundaries. For example, Alsace and Lorraine are counted as part of France even though they were folded into Germany during 1871-1918. Data for the Austro-Hungarian Empire have been carefully disaggregated pre-1920 (see Storchmann 2018). We also count European colonies as separate countries during the imperial period. Importantly, Algeria is considered a separate trading entity prior to, as well as following, its independence from France in 1962. It also means the colonies that came together to form the Federation of Australia in 1901 are treated as if the Federation also existed in the 19th century.⁵

Vine area and wine production

Data on vine bearing area is available for all countries of the world after 1900. Hence each country's share of the global vineyard area has been calculated. Using complementary information in the database on total crop area, population and real GDP, we have also calculated vine's share of the total crop area, vine area per capita, and vine area per million dollars of real GDP.

The wine production volume series is, together with the export volume series, the longest in the database, as there are data available from 1860 for the whole world. Again it has been possible to derive each country's share of global production as well as per capita production and production per \$m of real GDP.

Vine area and wine production (and trade) are shown also for earlier periods for France (from 1700), Portugal (from 1750) and South Africa (from 1666). And Greek raisin production (and export volume and value) are shown from 1835.

International trade in wine

⁵ The number of countries with greater than 100,000 inhabitants was 132 in 1835, but it halved over the next 60 years and was as few as 51 in 1912. By 1922, when the Austro-Hungarian and Ottoman empires had collapsed, there were 66 countries. That number had risen to 76 by 1950, 136 by 1970, 163 by 1990 and 182 by 2011 – or 195 if UN member countries with less than 100,000 inhabitants are included (Griffiths and Butcher 2013).

Data on trade include national wine exports and imports, in both volume and US\$ value terms. For several countries the volume data begin in 1835, but not for all countries until 1860 in the case of exports and 1925 in the case of imports. Export volumes are also expressed as a share of the volume of wine production, as well as per capita and per \$m of real GDP.

Current US dollar value of wine exports are available from 1850 for some key exporting countries and for all countries from 1900. In the case of wine import values, although there is information from 1835 for the then-two-biggest importing countries (Britain and Russia), it is only after 1960 for all countries. Export and import values are also expressed per capita, and as a percentage of all merchandise trade. Also reported are wine trade specialisation indexes,⁶ the index of revealed comparative advantage in wine,⁷ intra-industry trade indexes,⁸ and the unit values (average prices) of wine exports and imports.

It is too cumbersome to include bilateral trade data for all countries. However, for some countries there are early bilateral wine trade data available. For Britain, wine import data are available from 1323, with main supplying countries' shares shown from the late 1600s to 1940. The main destinations of wine exports and the principal origins of imports between 1850 and 1938 are provided also for France. For both countries data are also included on the tariffs paid at their borders on imports of wine.

Wine and other alcohol consumption

Wine, beer, spirits and total alcohol consumption data are included (from the World Health Organization) for all countries from 1960. They are also available for high-income countries from 1880 to 1936 (from the Institut National de la Statistique et des Études Économiques). For other countries with reliable wine production and trade volume data pre-1960, apparent wine consumption is estimated as net imports plus the average of production in the current and two previous years (so as to allow for delays

⁶ The trade specialization index is $(X-M)/(X+M)$ and so is within the range -1 to +1, and zero when wine exports = wine imports. It is reported in both volume and value terms.

⁷ The index of revealed comparative advantage is $(X_{ij}/X_{it})/(X_{nj}/X_{nt})$, where X is exports, i is country, j is wine, t is all merchandise exports, n is the world. A country has a comparative advantage (disadvantage) in wine when the index exceeds (is less than) one.

⁸ The intra-industry trade index is calculated in volume or value terms as the share of country i's wine exports going to country j $[x_{ij}/x_i]$ divided by the share of country j's imports (m_j) in world wine imports (m_w) net of country i's imports (m_i). That is, $[x_{ij}/x_i]/[m_j/(m_w - m_i)]$.

between production and final consumption and to smooth vintage weather fluctuations).⁹ Volumes of consumption are also expressed in litres of alcohol, total and per capita, per adult, and per \$m of real GDP and wine consumption (in litres of alcohol) per adult and per capita. Also included are shares of wine, beer and spirits in the total volume of alcohol consumption, wine imports as a share of wine consumption, wine self-sufficiency, and wine, beer and spirits consumption intensity indexes.¹⁰ A separate table shows consumer taxes on wine, beer and spirits for 2008, 2012 and 2014.

Original sources underlying the database

There are two international organisations that have specialized in global agricultural data compiling: the International Institute of Agriculture (IIA), and the Food and Agriculture Organization of the United Nations (FAO), each with their head office in Rome. They are the key source of data on vine bearing area, total agricultural crop area, and wine and beer production and trade volumes.

The IIA was founded in Rome in 1905 by David Lubin (1849-1919), an American trader and agricultural reformer of Polish origin. The objective of the IIA was to gather, classify and distribute information about crops, prices and international agricultural trade. It immediately began to publish international agricultural statistics. During its existence it published six statistical yearbooks starting with the data published in 1903 and ending in 1938. A seventh volume with the same format as the six previous publications was published after the war in conjunction with the newly created Food and Agriculture Organization (FAO) and covered the whole period of the Second World War. The FAO, created as a specialised agency of the United Nations, undertook the activities previously performed by the IIA, extending its objectives and

⁹ All consumption data, like production data, are ‘recorded’, that is, no account is taken of informally produced or homemade (legal or illegal) alcoholic beverage production or consumption. The World Health Organization (2011) estimates that 29% of world alcohol consumption was unrecorded in 2005, and that estimate is 48% in low-income countries and 69% in South and Southeast Asia, compared with 11% in high-income countries. These estimates are included in the database for each country for 2000, 2005 and 2010.

¹⁰ The consumption intensity index is calculated in volume or value terms for country i as f_{im}/f_m , where m is one of three beverages (wine, beer or spirits) and f_{im} is the fraction of wine, beer or spirits consumption in total national alcohol consumption volume or expenditure in country i such that $0 \leq f_{im} \leq 1$ and $\sum_m f_{im} = 1$. This is divided by the fraction for that same beverage in world total alcohol consumption, f_m , where $0 \leq f_m \leq 1$ and $\sum_m f_m = 1$.

aims significantly. Ties of senior officials of the IIA with the Italian fascist regime were the reason for dissolving the IIA and replacing it with the FAO (Pan-Montojo 2016). The number of products for which information was provided increased significantly over the years, as did the number of countries. There is no information before 1921 for vine area and wine production and 1925 for wine trade. The 1928-29 yearbook provides average annual production, area under vine and wine trade for the period 1909-13.

The FAO's *Yearbook of Food and Agricultural Statistics*, and after 1958 its *Production Yearbook* and *Trade Yearbook*, added to the pre-war statistics of the IIA, although it took a few years to match the quality and exhaustiveness of the data provided by the IIA (Yates 1955). Therefore, there are large gaps in the information provided during this period for countries of the Soviet Bloc and many Asian and African countries. After 1961 the data are available electronically from the FAOSTAT database.

The data published by the IIA and the FAO are based on official national statistics of each member country. Their quality depends, therefore, on the quality of the data assembled by national statistics offices.

In our case, for many countries we have also chosen to use the national statistics directly, as they offer more-complete data and other detailed information. These national data are usually obtained after being extracted and refined by researchers studying these countries. This is especially the case for France (Chevet et al. 2018), Germany, Austria, Switzerland and Hungary (Storchmann 2018), Italy (Federico et al. 2011; Federico and Martinelli 2018; Corsi et al. 2018), Spain (Gallego and Pinilla 1996), Portugal (Freire and Lains 2016; Lains 2018), United Kingdom (Ludington 2018), Argentina (Stein and Mateu 2018), Australia and New Zealand (Anderson 2015, 2018a), Chile (Morel-Astorga 2002; Foster and Melo 2018), South Africa (Vink et al., 2018), the United States (Alston et al. 2018), Greece (Petmetzas 2017), Algeria, Morocco and Tunisia (Meloni and Swinnen 2018), and East Asia (Anderson 2018b; Anderson and Harada 2018).

Macro variables such as population pre-1961, and real GDP, are from Maddison (2013). Exchange rates and total merchandise trade for the nineteenth century are from Federico and Tena-Junguito (2016). Russia's wine import values were kindly provided by Ekaterina Khaustova, derived from primary Russian archival sources in Moscow. For other countries, when data were required which were not included in the afore-

mentioned or standard United Nations sources (e.g. COMTRADE for trade data from 1961), they were obtained from Mitchell (2007a, b, c).

An overview of wine's globalization

The first systematic use of these data has been in a series of comparative analyses of the two waves of globalization on wine production, consumption and trade (Anderson and Pinilla 2018a). This section briefly highlights some of its findings.

In the first globalization wave, global wine exports (treating Algeria as part of France) grew almost four-fold between 1861 and 1891 but then fell so that by 1914 they were below their 1880 level. Exports fluctuated mostly between 5% and 10% of production, apart from peaking briefly at 15% in the late 1880s. Much of that earlier expansion was due to import growth by France, whose winegrape production had been devastated by the spread of the Phylloxera pest. Global wine exports declined even more between the late 1920s and mid-1940s, before taking off again for what is now a seven decade rise. It took until 1990 to reach the previous peak of 15% of wine production being exported, but it is now above 40% (Figure 1).

When global wine exports are expressed in value and compared with all merchandise exports (Figure 2), five sub-periods are worth focusing on. From 1860 to 1878 wine did not keep up with the expansion in global exports of other goods; during 1878-86, exports expanded faster for wine than for other goods – but that was just to solve France's crop failure; 1886-1916 saw wine exports again perform comparatively poorly; 1916-47 wine slipped a bit more; and from 1947 wine has held its own, apart from the downward adjustment in 1973 and 1980 when the price of petroleum quadrupled and then doubles, respectively. In short, leaving aside Europe's late nineteenth century Phylloxera devastation, the wine industry did not globalize when other industries did in the first globalization wave; but it certainly did in the second wave, and indeed started much earlier than most industries by having an export take-off immediately after World War II. That early post-war start had nothing to do with wine export growth in New World countries, as their take-off did not begin before the late 1980s (Figure 3), having made almost no impression on international wine markets during the first globalization wave.

The globalization of wine since the 1980s has been based not only on an increase in the exports of the traditional European exporting countries. Even though the level of wine production outside Europe was very low prior to 1900, colonisation by the Europeans of other temperate-zone countries, and the knowledge that their settler populations had of grape growing and wine making, gave rise to the beginning of their wine industry. Initially, the fastest growth of production was in Algeria (Isnard 1954; Meloni and Swinnen 2018). However, it was supplemented in the first third of the twentieth century by production in North and South America, Australia and South Africa. By the late 1930s non-Europeans accounted for one-fifth of global wine production. That share then remained flat until its take-off in the 1990s, and it is now close to two-fifths and so converging rapidly on Europe's share (Figure 4).

Convergence also characterizes wine consumption. Northwest Europe, North America and Australasia traditionally preferred beer or spirits to wine, in sharp contrast to the strong wine preference of Southern Europeans and temperate-zone South Americans. During the current globalization wave, however, wine-preferring countries have more than halved their per capita wine consumption while other high-income countries have converged – from very low levels – on the diminishing levels of traditional consumers (Figure 5); and so too are East Asians, albeit from an even lower starting point (Anderson 2018b). Forecasts that have been made regarding the consumption and trade of wine indicate that Asia will have an ever-growing weight in the world market over the next few years at least (Anderson and Wittwer 2018).

Conclusions

The study of the two waves of globalization has been a popular topic among historical researchers over the past three decades. A sizeable percentage of the most important studies on this subject have focused on flows of trade, workers or capital between the countries and continents. This has provided us with a solid foundation on which to base our interpretation of what has occurred, including the causal mechanisms of globalization, their characteristics and consequences.

There are different paths for continuing and extending the analyses of globalization processes. One is to study different countries in order to examine the

extent of their integration into the international economy and the consequences of this. Another is to select specific economic sectors or products. This requires access to a wider range of data than just trade-focused studies. Hence the database presented in this article, which freely provides researchers for the first time with a long-term series of global wine industry data. It offers extensive annual core information on production, trade and consumption of wine from 1835 to the present, plus myriad derived variables. We look forward to seeing it being used extensively by researchers, policy advisors and industry participants.

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Table 1. First year of data for key variables in annual database

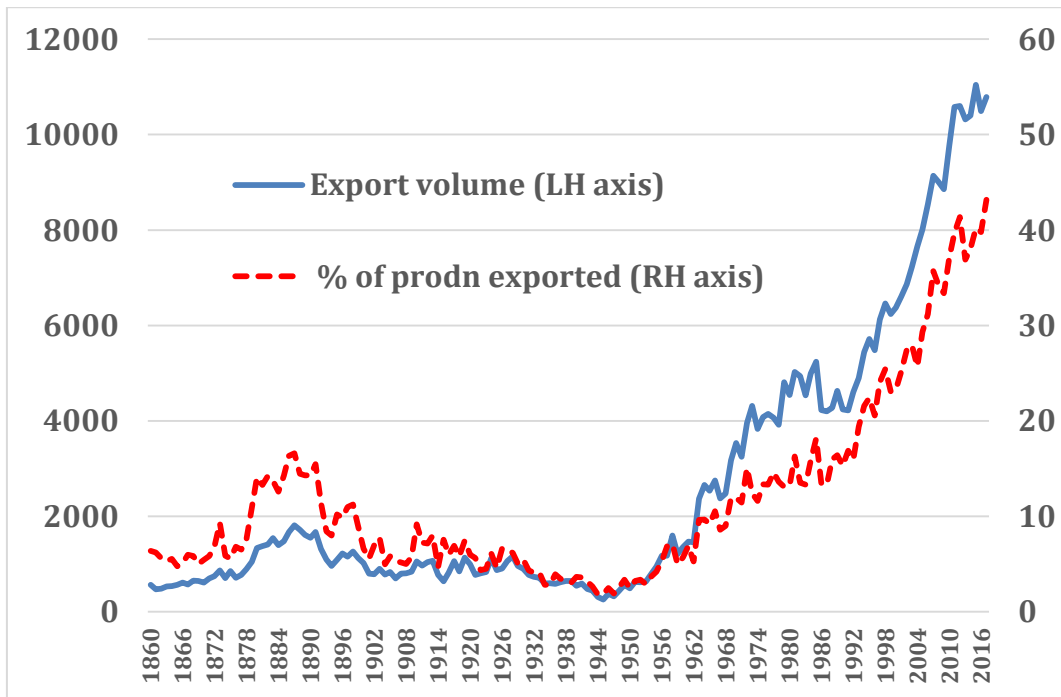
	Grape vine area	Volume of wine production	Volume of wine exports	Volume of wine imports	Value of wine exports	Value of wine imports	Volume of beverage wine consumption
Important countries ^a	1835	1835	1835	1835	1850	1850	1840
Most of the world	1890	1850	1850	1881	1890	1910	1862
World	1900	1860	1860	1925	1900	1961	1961

^a 'Important countries' are those representing a significant percentage of the global total of each variable

^b 'Most of the world' refers to countries that account for more than half of the global total of each variable

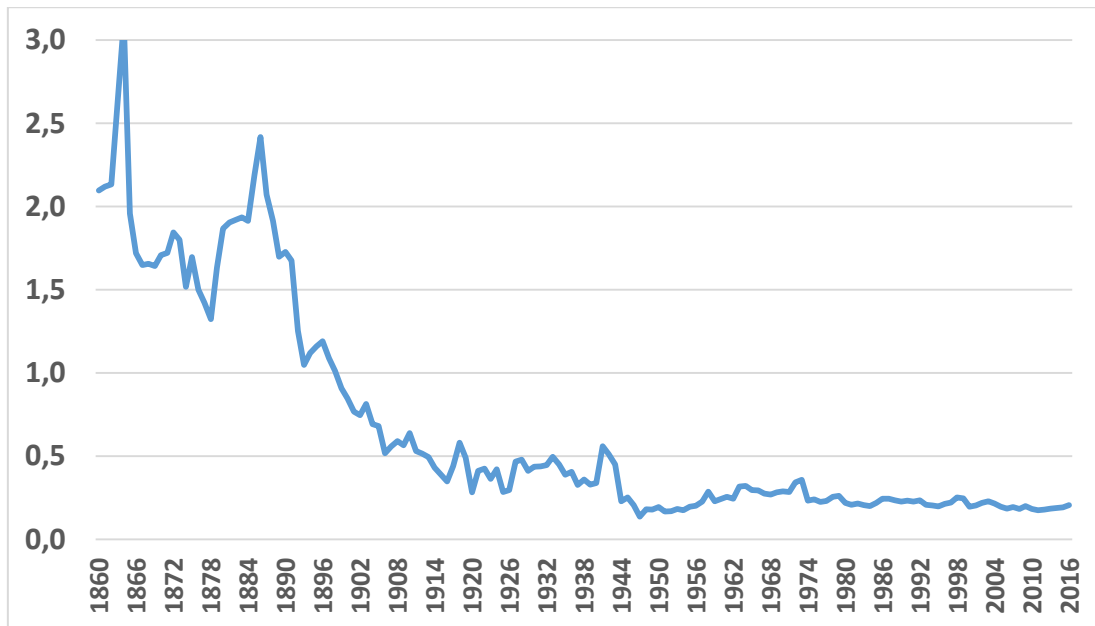
Source: Authors' compilation from Anderson and Pinilla (2017)

Figure 1. Global wine export volume (ML) and share of world wine production exported, 1860 to 2017 (% , assuming Algeria was part of France pre-1963)



Source: Authors' compilation from Anderson and Pinilla (2017)

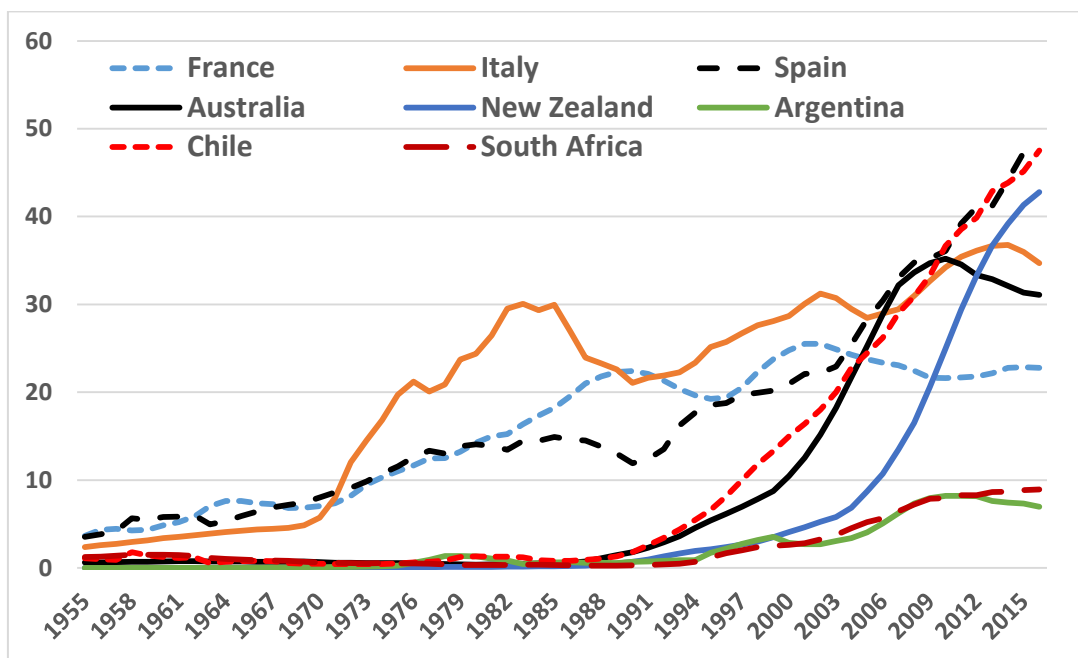
**Figure 2. Share of wine in the value of global merchandise exports, 1860 to 2016
(%, assuming Algeria was part of France pre-1963)^a**



^a Wine export value data are incomplete pre-1900, but the countries for which data are available accounted for 95% of the value of global wine exports (ignoring Algeria's) during 1900-09, so their sub-total is inflated by dividing it by 0.95 before expressing that estimate as a % of the value of world merchandise exports for 1860-99.

Source: Authors' compilation from Anderson and Pinilla (2017)

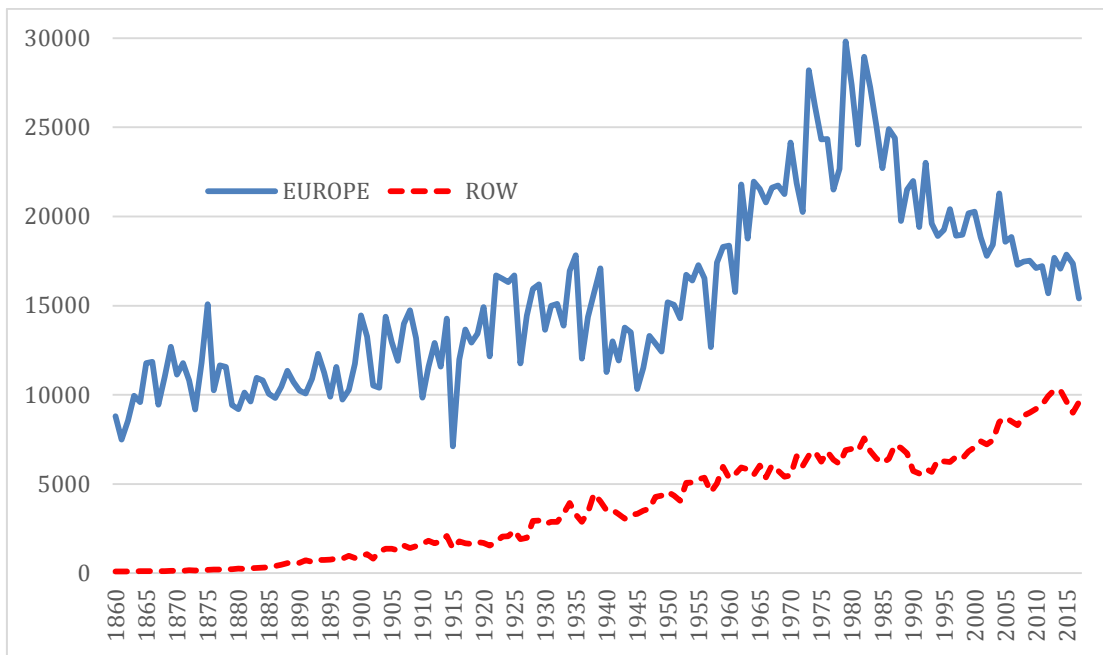
Figure 3. Wine export volume per capita, West European and New World countries, 1955 to 2016 (litres/year)



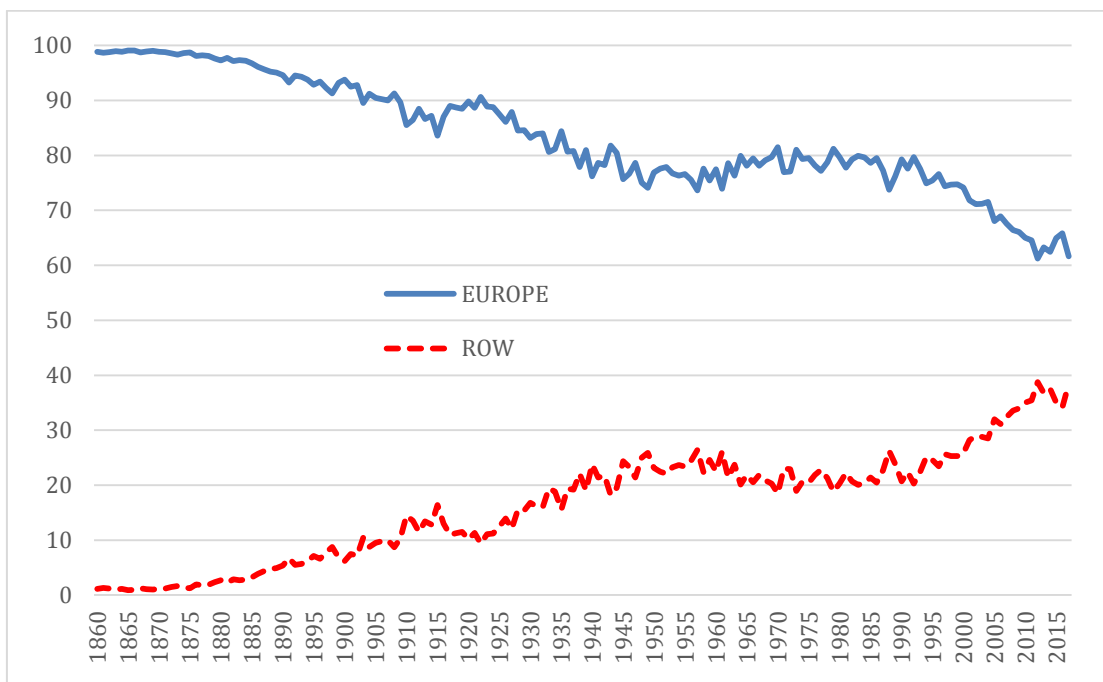
Source: Authors' compilation from Anderson and Pinilla (2017)

Figure 4. Global wine production, Europe and Rest of the World, 1860 to 2017

(a) Volume (ML)



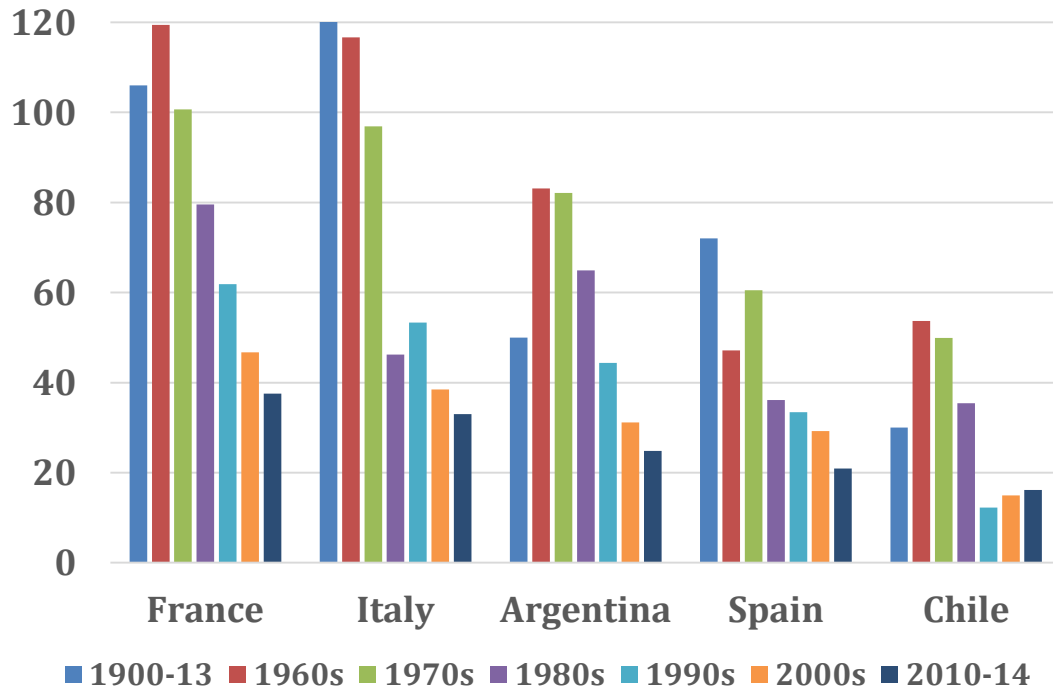
(b) Shares of global wine production (%)



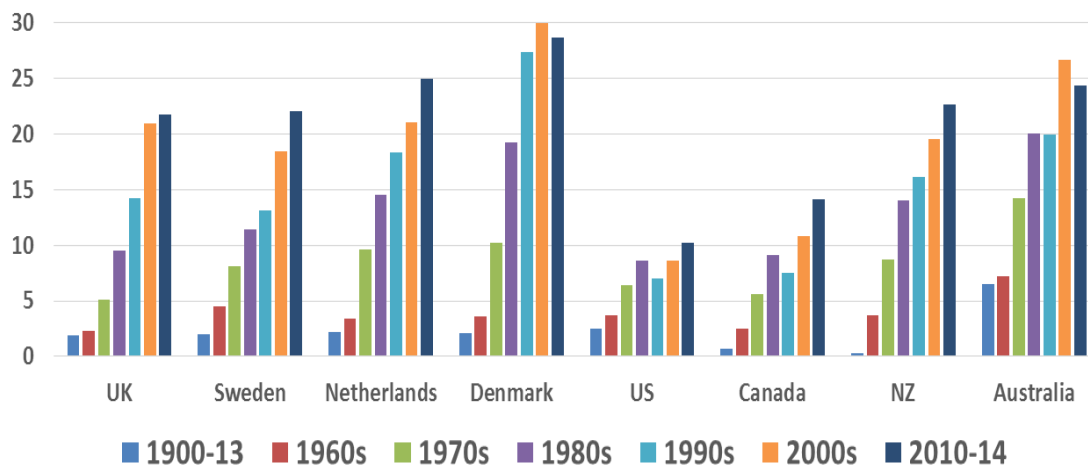
Source: Authors' compilation from Anderson and Pinilla (2017)

Figure 5. Per capita wine consumption, traditional and newer wine-consuming countries, 1900 to 2014 (litres per year)

(a) traditional wine-consuming countries



(b) newer wine-consuming countries



Source: Authors' compilation from Anderson and Pinilla (2017)

Appendix:

Variables included in *Global Wine Markets Annual Database, 1835 to 2016*

(accessible at <https://www.adelaide.edu.au/wine-econ/databases/global-wine-history>)

Items with * are core variables, most others are derived from them.

1. *Total grapevine area
2. Share of world grapevine area
3. Share of total agricultural crop area under vines
4. Grapevine area per capita
5. Grapevine area per \$m of real GDP
6. *Volume of wine production
7. Share of world wine production volume
8. Volume of wine production per capita
9. Volume of wine production per \$m of real GDP
10. *Volume of wine exports
11. Share of world wine export volume
12. Volume of wine exports per capita
13. Volume of wine exports per \$m of real GDP
14. Exports as % of wine production volume
15. *Volume of wine imports
16. Share of world wine import volume
17. Volume of wine imports per capita
18. Volume of wine imports per \$m of real GDP
19. Volume of net wine imports
20. Wine trade volume specialization index
21. *Value of wine exports (current US\$m)
22. Share of world wine export value
23. Value of wine exports per capita
24. Wine's share of value of all merchandise exports
25. *Value of wine imports (current US\$m)
26. Share of world wine import value
27. Value of wine imports per capita
28. Wine's share of value of all merchandise imports
29. Value of net wine imports (current US\$m)
30. Wine trade value specialization index
31. Index of revealed comparative advantage in wine
32. Unit value of wine exports (current US cents/litre)
33. Unit value of wine imports (current US cents/litre)
34. *Volume of beverage wine consumption
35. Volume of wine apparently available for consumption

36. Volume of non-beverage wine uses and stock changes
37. Share of world beverage wine consumption volume
38. Volume of beverage wine consumption per capita
39. Volume of beverage wine consumption per \$m of real GDP
40. Volume of beverage wine consumption (litres of alcohol)
- 41(a) Volume of beverage wine consumption per capita (litres of alcohol)
- 41(b) Volume of beverage wine consumption per adult (litres of alcohol)
42. *Volume of beer consumption
43. Share of world beer consumption volume
44. Volume of beer consumption (litres of alcohol)
- 45(a) Volume of beer consumption per capita (litres of alcohol)
- 45(b) Volume of beer consumption per adult (litres of alcohol)
46. *Volume of spirits consumption (litres of alcohol)
47. Share of world spirits consumption volume
- 48(a) Volume of spirits consumption per capita (litres of alcohol)
- 48(b) Volume of spirits consumption per adult (litres of alcohol)
49. Volume of total alcohol consumption (litres of alcohol)
50. Share of world alcohol consumption volume
- 51(a) Volume of total alcohol consumption per capita (litres of alcohol)
- 51(b) Volume of total alcohol consumption per adult (litres of alcohol)
52. Volume of total alcohol consumption per \$m of real GDP
- 53(a) Wine's share of total alcohol consumption volume (%)
- 53(b) Beer's share of total alcohol consumption volume (%)
- 53(c) Spirits's share of total alcohol consumption volume (%)
54. Imports as % of beverage wine consumption volume
55. Net imports as % of beverage wine consumption
56. Wine self-sufficiency in terms of volume
57. *Total crop area
58. *Total population
59. Share of world total population
60. *Share of adults (>14 years) in total population
61. *Gross domestic product (GDP), real at 1990 prices
62. Share of world real GDP at 1990 prices
63. GDP per capita at 1990 prices
64. *Merchandise exports (current US\$m)
65. Share of world merchandise exports
66. *Merchandise imports (current US\$m)
67. Share of world merchandise imports
68. *Market (nominal) exchange rates per US\$
69. Real exchange rates per US\$
- 70(a) *Consumer price index
- 70(b) *Wine consumer price index

- 70(c) *Beer consumer price index
- 70(d) *Spirits consumer price index
71. *Volume of British wine imports, total and per capita, 1323 to 1862
72. *Volume of British wine imports by source, and value, 1675 to 1940
73. Share of British wine import volumes by source, 1675 to 1940
74. *British wine import taxes, by source, 1660 to 1862
75. *British wine and spirits import taxes and beer and spirits excise taxes, ad valorem equivalents, 1827 to 1913
- 76(a). *Volume and shares of French wine exports, by destination, 1845 to 1938
- 76(b). *Volume and shares of French wine imports, by source, 1850 to 1938
77. *Volume of French wine imports, by source, 1847 to 1938, and French wine import and Algerian wine export volumes, 1875 to 2015
78. *French import taxes on bulk wine, ad valorem equivalents, 1877 to 1934
79. *South African (Cape) vine area, wine production and wine exports, 1666 to 1909
80. *Consumer (excise) taxes on wines, beers and spirits, various countries, 2008, 2012 and 2014
81. *Unrecorded wine and other alcohol consumption, 2000, 2005 and 2010
82. *Volume of wine distillation, various countries, 1840 to 2014
83. *Volume of beer production, 1961 to 2013
84. *Volume of beer exports, 1961 to 2013
85. *Volume of beer imports, 1961 to 2013
86. Volume of beer net imports, 1961 to 2013
87. Share of beer production exported (%), 1961 to 2013
88. Share of beer consumption imported (%), 1961 to 2013
89. Beer trade volume specialization index, 1961 to 2013
90. *Greek raisin production and export volume and value, 1835 to 2016
91. *Portugal's port wine production and export volumes, 1772 to 1850
92. *Shares of domestic still wine sales volume by 4 largest firms, 2009 and 2014
93. *French vine area and volumes of wine production, imports and exports, 1700 to 1835
94. Intra-industry trade volume index, 1835 to 2016
95. Intra-industry trade value index, 1835 to 2015
96. Wine consumption intensity index, 1961 to 2015
97. Beer consumption intensity index, 1961 to 2015
98. Spirits consumption intensity index, 1961 to 2015